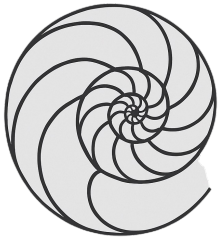

Rebuilding the U.S. Productivity Frontier:

Frontier Innovation, Diffusion, and the Next Growth Cycle (2025–2035)

Productivity Frontier Series

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Executive Summary

The United States enters the decade 2025–2035 facing a structural contradiction: frontier innovation is accelerating at an unprecedented pace, yet broad-based productivity remains historically subdued. The country risks becoming a high-frontier, low-median economy—one in which a small set of regions and firms capture outsized gains while the majority of workers, enterprises, and communities experience stagnation. This whitepaper outlines a national strategy for rebuilding the U.S. productivity frontier by closing the diffusion gap, strengthening absorptive capacity across sectors and regions, and reconfiguring the institutional foundations of innovation-led growth.

The central message is that productivity gains will not arise automatically from technological breakthroughs. They require complementary capabilities—organizational modernization, flexible workforce systems, digital public infrastructure, and a financing architecture aligned with long-term diffusion. The next growth cycle will depend on the United States' ability to translate frontier technologies into system-wide gains through coordinated investment, regulatory modernization, and institutional resilience. Doing so is essential not only for economic performance but for fiscal stability, geopolitical competitiveness, and the renewal of social mobility.

1 Narrative Opening: Why Productivity Matters Now

The years 2020–2025 exposed multiple structural weaknesses but also revealed new sources of economic potential. The pandemic triggered rapid automation and digital adoption, while labor shortages forced firms to redesign workflows and accelerate investment in technology. These shifts enhanced the performance of frontier firms but widened gaps in capability and productivity between leading and lagging regions. At the same time, cost-of-living pressures intensified, reducing household mobility and limiting the ability of workers to relocate to high-opportunity clusters.

Productivity is now the defining variable for America's long-term trajectory. Without stronger productivity growth, the United States will struggle to sustain wage gains, manage rising fiscal obligations, or maintain competitiveness in an environment of technological rivalry and strategic supply-chain reconfiguration. The next decade will involve a contest between two structural paths: a fragmented landscape marked by concentrated prosperity and persistent stagnation, or a rebalanced system in which technological advances translate into broad and durable improvements in economic performance.

The core challenge is not innovation itself—where the U.S. remains exceptionally strong—but the capacity to diffuse and scale innovation across diverse economic geographies, institutional settings, and organizational models. The question is whether the country can build the institutional

architecture needed to convert technological acceleration into nationwide growth.

2 Context and Background: The Structural Reset, 2020–2025

The period 2020–2025 reshaped the economic and institutional landscape in ways that will define the next productivity cycle. Several structural shifts are particularly important:

2.1 Digital Acceleration and Uneven Adoption

Firms rapidly adopted cloud services, automation tools, and AI-enabled applications to maintain operations during periods of disruption. However, adoption remained highly concentrated among large enterprises and advanced clusters. Small and mid-sized firms, along with many public institutions, lacked the managerial and technical capacity to convert digital tools into productivity gains. The result was a growing divergence between frontier and non-frontier organizations.

2.2 Labor Market Realignment

The U.S. labor market experienced sustained pressure as participation fluctuated, job-switching increased, and hybrid skill demands expanded. High-skill technical roles grew quickly, while mid-skill routine work contracted. The absence of scalable mid-career retraining and credential portability slowed the workforce transition, reducing the economy's ability to absorb new technologies.

2.3 Regional Divergence

Innovation, capital investment, and high-wage employment continued to concentrate in a handful of metropolitan clusters. Regions without the necessary infrastructure, workforce, or institutional capacity saw limited gains from the national innovation boom. This deepened regional disparities in opportunity, mobility, and economic dynamism.

2.4 Cost-of-Living and Mobility Constraints

Housing shortages in high-productivity regions raised affordability barriers. Combined with rising childcare and healthcare costs, these constraints reduced labor mobility and prevented workers from relocating to areas where productivity and wages are highest. This diminished the reallocation mechanisms that historically underpinned U.S. growth.

2.5 Fiscal and Monetary Normalization

Large-scale fiscal interventions in the early 2020s supported demand but increased public liabilities. As monetary conditions normalized and real interest rates rose, federal and subnational governments encountered tighter budget constraints. These fiscal pressures limited the scope for growth-oriented public investment and increased the importance of aligning spending with long-term productivity priorities.

2.6 Strategic Competition and Supply-Chain Reconfiguration

Geopolitical competition intensified the need for secure supply chains in semiconductors, clean energy, biotechnology, and critical minerals. Firms and governments began shifting from efficiency-driven globalization to resilience-oriented regionalization. This transition increased strategic investment needs while raising coordination challenges across federal, state, and private actors.
Collectively, these shifts created a structural reset: a landscape where technological potential is high but systemic constraints impede broad-based progress. The next decade will depend on the country's ability to overcome these constraints and rebuild the foundations of a productivity-driven growth cycle.

3 Structural Drivers of the Productivity Frontier

The U.S. productivity outlook for 2025–2035 is shaped by a set of structural drivers that determine the speed, scale, and distribution of growth. These drivers interact across technology, labor markets, capital allocation, regional development, and infrastructure. Understanding their architecture is essential for designing a national productivity strategy capable of translating frontier innovation into widespread economic gains.

3.1 Frontier Technology Acceleration

Advances in artificial intelligence, biotechnology, advanced materials, and semiconductor design have increased the velocity of frontier innovation. The most productive firms are rapidly integrating AI-driven decision systems, autonomous workflows, and high-performance computing to enhance output. However, the benefits of these technologies are highly skewed. Frontier firms accumulate data advantages, specialized talent, and economies of scope that are difficult for others to replicate. Without mechanisms to broaden adoption, technological acceleration risks reinforcing existing disparities in productivity and income.

3.2 Diffusion and Absorptive Capacity Gaps

The primary constraint on national productivity is the uneven capacity of firms and public institutions to adopt advanced technologies. Many mid-sized firms lack the managerial expertise, data infrastructure, or complementary capital investments required to make new technologies effective. Public-sector organizations face procurement barriers, legacy systems, and fragmented governance. These absorptive capacity gaps slow diffusion and limit aggregate productivity gains, even when frontier innovation is strong.

3.3 Regional Economic Divergence

Economic dynamism is increasingly concentrated in a small number of metropolitan clusters with deep talent pools, capital density, and research ecosystems. Regions with weaker infrastructure or limited institutional capacity attract fewer high-growth firms, perpetuating uneven opportunity. This divergence constrains national productivity because it limits the geographic spread of high-value industries and reduces the mobility of workers seeking better opportunities.

3.4 Skills, Demographics, and Labor-Market Transitions

Demographic trends—including slower population growth and an aging workforce—reduce the labor supply available for high-productivity sectors. At the same time, the demand for hybrid skill sets combining technical, analytical, and interpersonal capabilities increases. Existing education and training systems are not fully aligned with emerging job requirements, and credential portability remains limited across states and sectors. Without a modernized workforce development system, the economy risks persistent skill shortages and slower productivity growth.

3.5 Infrastructure and Digital Public Goods

Digital public goods—broadband coverage, cloud access, interoperable data systems, cybersecurity infrastructure—are essential for the next stage of productivity growth. Many regions lack high-quality digital infrastructure, limiting their attractiveness to innovative firms and reducing the efficiency of public services. Physical infrastructure, particularly transportation and energy systems, faces maintenance backlogs and climate-related vulnerabilities. These deficiencies add friction to economic activity and reduce the potential impact of technological investments.

3.6 Capital Allocation Patterns

Capital flows increasingly favor large firms, established clusters, and capital-intensive industries. Venture and private equity investment remain highly concentrated, leaving many promising regions and mid-sized enterprises underfunded. Public financing mechanisms have not kept pace with strategic investment needs, particularly in areas where private capital is hesitant to engage. This imbalance reduces the scope of productivity-enhancing investment and accelerates regional divergence.

3.7 Organizational and Managerial Complexity

The productivity performance of many firms is limited by outdated organizational structures, fragmented workflows, and insufficient investment in managerial capabilities. The integration of advanced technologies requires redesigning processes, enhancing data governance, and strengthening change-management functions. Without addressing organizational complexity, firms struggle to translate digital tools into sustained productivity gains.

4 Mechanism Map: How Productivity Gains Break Down

The barriers to broad-based productivity growth arise from interconnected mechanisms that reinforce one another. These mechanisms operate across firms, regions, and institutions, forming a system in which local frictions accumulate into national-level stagnation. Five mechanisms are particularly consequential for the U.S. productivity frontier.

4.1 The Frontier–Diffusion Divide Loop

Technological breakthroughs at the frontier generate large returns for leading firms but do not automatically diffuse to the rest of the economy. Limited absorptive capacity in lagging firms prevents advanced tools from being deployed effectively. As frontier firms extend their lead, mid-tier firms fall further behind, reducing competitive pressure and diminishing aggregate productivity gains.

4.2 The High-Cost Mobility Loop

High housing and childcare costs in productive regions reduce labor mobility, preventing workers from relocating to areas where productivity and wages are highest. Reduced mobility weakens reallocation mechanisms, limiting the matching of skills with high-value jobs and reducing the

labor-market dynamism that historically propelled U.S. growth. This mechanism reinforces regional disparities and lowers national productivity potential.

4.3 The Organizational Friction Loop

Many firms deploy automation and digital tools without redesigning workflows or updating managerial systems. Legacy processes, siloed data, and insufficient change-management capacity produce friction that offsets the potential benefits of technology. Organizational bottlenecks reduce the productivity impact of innovation and create uneven adoption patterns across industries.

4.4 The Capital–Geography Concentration Loop

Investment flows toward regions with the strongest innovation ecosystems, creating a self-reinforcing cycle: capital clusters in high-productivity metros, attracting talent and firms, which in turn attract more capital. Regions without such clusters struggle to break into high-growth industries, limiting their ability to participate in the national productivity frontier. This concentration intensifies regional inequality and reduces aggregate growth.

4.5 The Infrastructure Bottleneck Loop

Inadequate broadband access, fragmented data systems, and aging physical infrastructure reduce the efficiency of businesses and public institutions. These bottlenecks constrain the adoption of advanced technologies, raise operational costs, and limit regional competitiveness. Without significant upgrades, infrastructure weaknesses will continue to undermine productivity gains across the economy.

5 Sector Module: The Five Pillars of the Productivity Frontier

The U.S. productivity frontier depends on a coordinated effort across five structural pillars. Each pillar reflects a distinct domain of capability and policy action. Taken together, they form the foundation for broad-based, inclusive productivity growth.

5.1 Pillar 1: Absorptive Capacity

Absorptive capacity is the ability of firms and public institutions to integrate advanced technologies and organizational practices. Strengthening this pillar requires investments in managerial training,

digital readiness, data governance, and complementary capital. Programs that provide technical assistance to mid-sized firms, modernize public procurement, and support regional capacity-building are central to enhancing absorption.

5.2 Pillar 2: Workforce Transformation

The workforce of the next decade must adapt to new hybrid roles that blend technical, analytical, and interpersonal skills. Workforce transformation involves redesigning education and training systems, expanding mid-career reskilling, and enabling credential portability across states and sectors. Effective workforce policies should align employer demand with rapid training pathways and support workers transitioning from declining occupations.

5.3 Pillar 3: Capital and Innovation Geography

Capital concentration in a few regions limits the national diffusion of innovation. A more balanced geography of innovation requires targeted incentives, regional innovation hubs, and infrastructure investments that make emerging regions attractive to high-growth firms. Aligning public and private capital flows with regional development strategies can reduce disparities and expand the U.S. productivity frontier.

5.4 Pillar 4: Organizational Process Redesign

Productivity gains depend not only on technology adoption but on organizational modernization. Firms must redesign workflows, adopt integrated data systems, and enhance managerial capabilities to fully capture the benefits of automation and digital tools. Public-sector institutions face similar challenges: outdated processes and siloed information limit their ability to deliver efficient services and support economic growth.

5.5 Pillar 5: Digital Backbone and Infrastructure

A robust digital backbone—broadband access, high-speed cloud connectivity, interoperable data standards—is essential for sustained productivity growth. Physical infrastructure, including transportation networks and resilient energy systems, must also be upgraded to support economic activity and mitigate climate risks. Investments in digital and physical infrastructure will determine the ability of regions to participate in the next productivity cycle.

6 Critical Vulnerabilities and Fault Lines

While the United States retains unparalleled frontier innovative capacity, its long-term trajectory depends on confronting a set of structural vulnerabilities that impede broad-based productivity gains. These vulnerabilities are not cyclical disturbances; they are embedded constraints that shape the boundaries of national performance. Addressing them requires coordinated action across federal, state, private, and civic institutions. The core fault lines include labor-market frictions, housing and mobility constraints, financing pressures, regional asymmetries, climate and infrastructure fragility, and gaps in institutional coordination.

6.1 Structural Skill Mismatch

A persistent mismatch exists between emerging skill demands and the capabilities of large segments of the labor force. High-growth sectors increasingly require hybrid competencies that combine technical literacy, problem-solving, communication, and adaptation to human–machine collaboration. Yet educational and training systems remain slow to adjust, producing insufficient throughput and high friction during mid-career transitions. Without a robust capacity to align skills with the evolving production frontier, technological progress will remain narrowly concentrated.

6.2 Housing and Mobility Blockages

Housing supply constraints in high-productivity metropolitan areas continue to restrict the movement of workers into opportunity-rich regions. Zoning restrictions, slow permitting, high land costs, and insufficient investment in transit infrastructure elevate the cost of urban living and suppress geographic mobility. This dynamic limits the reallocation of labor toward high-value clusters and artificially compresses the national productivity potential.

6.3 Financial and Capital Allocation Constraints

Higher real interest rates and elevated federal debt service obligations narrow the fiscal space needed for growth-oriented public investment. States and municipalities face uneven access to capital markets, and private capital remains heavily concentrated in frontier sectors and geographies. The result is a funding environment that can sustain frontier innovation but struggles to finance the diffusion of technology and the modernization of lagging regions.

6.4 Regional Divergence and Economic Dualism

A widening gap between advanced innovation clusters and lagging regions represents a significant structural vulnerability. Regions without infrastructure, institutional quality, or skilled labor pools encounter cumulative disadvantages that impede adoption of new technologies. As divergence grows, political tensions deepen and policy coordination becomes more difficult. Regional dualism undermines national cohesion and reduces aggregate resilience.

6.5 Climate and Infrastructure Fragility

Extreme weather events impose growing costs on infrastructure, supply chains, and municipal budgets. Energy grids, water systems, and transportation networks face aging assets, rising maintenance burdens, and inadequate resilience investments. Regions exposed to climate shocks experience heightened economic volatility and diminished investment attractiveness, weakening the overall productivity base.

6.6 Institutional Coordination Gaps

Fragmentation across levels of government—federal, state, regional, and municipal—produces inconsistent regulation, misaligned incentives, and duplicative administrative burdens. The lack of coordination complicates large-scale modernization of housing, energy, workforce, and digital systems. Without a more coherent governance architecture, the country risks policy drift and ineffective implementation of critical reforms.

7 Scenarios for America's Productivity Future, 2025–2035

The evolution of U.S. productivity over the next decade will depend on how structural drivers and vulnerabilities interact. Four scenarios outline the plausible paths. These scenarios are not predictions but structured lenses for understanding the consequences of strategic choices and external developments.

7.1 Scenario 1: High-Frontier / High-Diffusion

In this trajectory, strong federal–state coordination, targeted industrial policy, and comprehensive workforce reform enable rapid diffusion of frontier technologies across sectors and regions. Housing supply expands through zoning reform and accelerated permitting, stabilizing affordability in high-opportunity areas. Investments in digital and physical infrastructure reduce bottlenecks that

previously limited adoption. The productivity frontier broadens, and a larger share of workers and firms participate in new value-creation opportunities. Fiscal resilience improves as growth widens the base of productive activity.

7.2 Scenario 2: High-Frontier / Low-Diffusion

Frontier innovation accelerates in advanced clusters, but diffusion mechanisms remain weak. Housing and mobility constraints persist, workforce training remains fragmented, and public investment fails to scale in lagging regions. Productivity gains concentrate in a narrow set of sectors and geographies, while national measures of median productivity and wage growth stagnate. Regional divergence intensifies, political polarization deepens, and fiscal burdens rise as demands for social support increase without commensurate growth in productive capacity.

7.3 Scenario 3: Low-Frontier / Low-Diffusion

A combination of adverse shocks—financial volatility, regulatory fragmentation, stalled innovation investment, or geopolitical disruptions—reduces frontier dynamism. Without strong frontier performance, diffusion channels have little to transmit. Firms delay modernization, public investment falls behind, and workforce programs remain under-resourced. The economy experiences a prolonged period of subdued productivity growth, rising fiscal pressure, and weak labor-market mobility.

7.4 Scenario 4: Fragmented Regional Trajectories

The country develops a patchwork productivity landscape. Some states and metropolitan regions successfully modernize through targeted investment and strong governance, while others fall behind due to institutional constraints, fiscal stress, or demographic decline. National productivity indicators mask a widening distribution of outcomes. Fragmented trajectories reduce system-wide resilience and complicate national-level policy coordination.

These scenarios demonstrate that the decisive variable for the next decade is not innovation supply, but the institutional and economic structures that determine how innovation is absorbed, scaled, and distributed.

8 Strategic Priorities: A National Productivity Agenda

Rebuilding the U.S. productivity frontier requires a structured set of strategic priorities that align national, regional, and organizational actions. These priorities target the mechanisms that block

diffusion and limit broad-based gains. The agenda integrates workforce transformation, regional rebalancing, organizational modernization, infrastructure renewal, and financial alignment.

8.1 Priority 1: Rebuild Absorptive Capacity Nationwide

Accelerate the ability of firms, public institutions, and local systems to adopt, integrate, and scale frontier technologies. This involves investment in digital readiness, managerial training, process redesign, and the creation of shared technical resources for smaller enterprises and local governments. Absorptive capacity must become a central objective of national economic policy.

8.2 Priority 2: Modernize Workforce Systems and Skill Pathways

Develop a workforce architecture that supports dynamic skill formation, mid-career transitions, and portable credentials. Expand the capacity of community colleges and training providers, incentivize employer-led reskilling programs, and align certification frameworks with the needs of emerging sectors. The objective is to enable workers to move fluidly into productive roles as technology evolves.

8.3 Priority 3: Reconfigure the Geography of Innovation

Strengthen emerging regional innovation hubs and connect them to frontier clusters through coordinated investment, infrastructure, and talent networks. Strategic funding for applied research, advanced manufacturing, and innovation diffusion can reduce concentration and create new engines of regional growth.

8.4 Priority 4: Accelerate Organizational Transformation

Promote widespread modernization of organizational processes to reduce workflow friction and enhance productivity. Encourage firms to redesign job roles, integrate human–AI collaboration, and streamline managerial practices. Public-sector institutions also require organizational upgrades to improve implementation capacity and service delivery.

8.5 Priority 5: Upgrade Digital and Physical Infrastructure

Expand and modernize broadband networks, cloud access, power grids, and transportation systems. Prioritize interoperability, cybersecurity, and data infrastructure that enable firms and institutions to integrate new technologies at scale. Resilient infrastructure underpins the operational foundations of national productivity.

8.6 Priority 6: Align Financial Incentives with Diffusion Goals

Redesign federal and state funding mechanisms to support long-term productivity investment. Establish financing structures that incentivize modernization in lagging regions, reduce borrowing constraints for critical infrastructure, and direct private capital toward diffusion-enabling projects. Align tax incentives and credit programs with national productivity objectives.

These strategic priorities form a coherent agenda for restoring widespread productivity growth. Without bold action along these dimensions, frontier innovation will remain decoupled from national economic progress.

9 Policy Roadmap: A Ten-Year Sequencing Strategy

The decade from 2025 to 2035 requires a policy architecture that sequences reforms in a pragmatic and achievable manner. The objective is to align short-term capacity building with medium-term modernization and long-term institutional transformation. Effective sequencing reduces implementation risks, ensures coherence across federal and state actions, and provides predictability for private investment.

2025–2028: Immediate Capacity Uplift

The early phase must focus on high-leverage interventions that expand the country's ability to absorb and deploy advanced technologies.

- **National Diffusion Initiatives:** Establish federal-state programs that provide technical assistance, digital integration toolkits, and organizational audits for firms and public institutions. These programs should prioritize SMEs, local governments, and service sectors with persistent productivity gaps.
- **Workforce Transition Infrastructure:** Launch a nationwide reskilling effort centered on community colleges, portable credentials, and employer-led training partnerships. This phase emphasizes rapid skill acquisition and targeted subsidies for mid-career transitions.
- **Housing and Mobility Reforms:** Encourage zoning modernization and accelerate housing supply in high-opportunity regions through incentives tied to permitting reform and infrastructure readiness.
- **Digital Public Infrastructure:** Expand secure broadband access, cloud migration for public agencies, and interoperable data systems to reduce fragmentation and enable scaling of digital solutions.

- **Early Fiscal Realignment:** Reallocate budget space toward productivity-enhancing investments by reducing low-impact expenditures and improving procurement efficiency.

2028–2032: Structural Modernization

The second stage consolidates early gains and pushes deeper reforms across regulatory, institutional, and financial systems.

- **Regulatory Modernization Pipelines:** Standardize regulatory processes across states for data portability, digital identity, and advanced manufacturing. Implement fast-track pathways for high-impact projects in critical sectors.
- **Regional Innovation Compacts:** Create cross-state alliances that pool resources for research, workforce development, and commercialization. These compacts should coordinate incentives to reduce destructive competition and promote balanced growth.
- **Long-Term Workforce Mobility:** Strengthen labor mobility through harmonized credential recognition, expanded relocation support, and integrated digital job-matching platforms.
- **Financing the Next-Generation Infrastructure:** Scale blended finance models that combine federal guarantees, municipal bonds, and private capital to upgrade energy grids, ports, and resilient logistics.
- **Industrial Strategy Alignment:** Ensure that incentives for frontier industries include clear diffusion requirements—such as supplier development programs, open standards, and adoption subsidies for smaller firms.

2032–2035: Institutional Integration and Long-Term Sustainability

The final phase focuses on integrating reforms into a durable institutional framework capable of sustaining productivity growth for decades.

- **National Productivity Governance System:** Establish a federal coordinating body responsible for monitoring diffusion, evaluating regional performance, and aligning incentives across agencies.
- **Fiscal Sustainability Architecture:** Implement multi-decade fiscal planning that aligns debt management, public investment, and revenue strategies to preserve capacity for long-term productivity-enhancing initiatives.

- **Resilient Systems Integration:** Embed climate adaptation, cybersecurity standards, and digital resilience into infrastructure planning and regulatory frameworks.
- **Institutional Learning Loops:** Create mechanisms for continuous evaluation of policy effectiveness, enabling iterative improvements and transparent public reporting.

10 KPIs and Early Warning Indicators

Monitoring progress requires a structured set of indicators that track diffusion, organizational transformation, regional convergence, and system resilience. The following KPIs form a national dashboard for policymakers.

Diffusion and Adoption Indicators

- **Technology Diffusion Index:** Measures the adoption of advanced technologies across firms and public institutions, segmented by region and sector.
- **Organizational Modernization Score:** Assesses workflow redesign, digital integration, and management capability improvements.
- **SME Digital Readiness:** Tracks critical digital competencies among small and medium-sized firms.

Regional and Workforce Indicators

- **Regional Productivity Dispersion:** Monitors differences between frontier and median regions to identify divergence or convergence trends.
- **Labor Transition Metric:** Captures reskilling participation, credential portability, and placement effectiveness in transitioning occupations.
- **Housing Mobility Index:** Examines the relationship between housing affordability, migration flows, and access to high-productivity regions.

Infrastructure and Institutional Indicators

- **Digital Backbone Reliability:** Evaluates broadband performance, cloud adoption in public services, and data interoperability.

- **Capital Allocation Diversity Metric:** Measures the geographical and sectoral distribution of private investment in productivity-enhancing assets.
- **Institutional Capacity Benchmark:** Tracks improvements in permitting speed, procurement efficiency, and administrative capability across regions.

Early Warning Indicators

- **Persistent Regional Divergence:** A sustained increase in productivity dispersion signals weakening diffusion.
- **Declining Workforce Mobility:** Falling interstate mobility combined with rising cost-of-living pressures indicates structural blockages.
- **Infrastructure Stress Metrics:** Increasing frequency of digital outages, grid failures, or logistical bottlenecks signals resilience risks.
- **Fiscal Constraint Index:** Rising debt service costs relative to public investment points to long-term sustainability challenges.

11 Implementation Requirements

Success depends on building a multi-level implementation system that aligns federal ambition, state capacity, private-sector capability, and community-level adoption. This chapter outlines the institutional architecture required to sustain productivity growth.

Federal–State Coordination

A coordinated governance model is essential for aligning incentives, reducing policy fragmentation, and scaling successful programs. Federal agencies must provide strategic direction, funding, and technical support, while states tailor implementation to local conditions and build institutional capacity.

Regulatory and Administrative Modernization

Public institutions must upgrade administrative processes to match the speed and complexity of modern technologies. This includes digital permitting, interoperable data systems, streamlined procurement, and regulatory frameworks designed to encourage innovation while preserving safety and fairness.

Public–Private Capability Coalitions

The private sector plays a central role in diffusion and adoption. Capability coalitions—linking anchor firms, SMEs, education providers, and civic institutions—can accelerate knowledge transfer, workforce development, and supply-chain modernization. These coalitions should be supported through targeted grants and shared infrastructure.

Financing Mechanisms

A diversified financing architecture is required to support long-term investment in infrastructure, technology adoption, and organizational modernization. Instruments include federal guarantees, state bonds, blended finance models, and performance-based grants that reward measurable improvements.

Data and Monitoring Infrastructure

Productivity governance requires reliable data on adoption, regional disparities, workforce transitions, and infrastructure performance. A national data platform should integrate federal, state, and private-sector inputs to support evidence-based decision-making and continuous policy iteration.

Institutional Capacity Building

Lagging regions require targeted support to build administrative capability, develop specialized workforce programs, and implement regulatory reforms. Capacity-building initiatives must be embedded into all major federal programs to avoid reinforcing structural disparities.

12 Appendices

Appendix A: Methodology Overview

The appendix describes the analytical approach used to assess structural drivers, interaction mechanisms, and long-term scenarios. It details how qualitative and quantitative evidence was combined to build a multi-layered understanding of the productivity frontier.

Appendix B: Case Studies

This section provides short case studies illustrating successful diffusion and adoption across different sectors and regions. Cases highlight organizational modernization, digital transformation

pathways, and regional capacity-building strategies.

Appendix C: Scenario Matrix Details

The appendix elaborates on the assumptions, indicators, and risk factors used to construct scenarios for the 2025–2035 productivity landscape. It outlines sensitivity tests and alternative trajectories.

Appendix D: KPI Construction Notes

A technical overview of the metrics used in the KPI dashboard, including definitions, data sources, and measurement considerations. It also explains how these indicators can be incorporated into ongoing monitoring and evaluation frameworks.

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